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## AN ANNOTATED LIST OF THE DROSOPHILID FLIES (DIPTERA: DROSOPHILIDAE) OF CHUKOTKA

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**Summary.** An annotated list of 14 species in three genera of the drosophilid flies of the Chukotka Autonomous Okrug is given. Among them eleven species are recorded from Chukotka for the first time. The drosophilid fauna of Chukotka is compared with Northern Yakutia and Kamchatka.

**Key words:** Diptera, Drosophilidae, fauna, new records, Russian Far East.

**Н. Г. Горностаев. Анnotatedный список мух-дрозофилид (Diptera: Drosophilidae) Чукотки // Дальневосточный энтомолог. 2018. N 368. С. 16-19.**

**Резюме.** Приведен аннотированный список 14 видов из 3 родов мух-дрозофилид Чукотского автономного округа, из которых 11 видов впервые отмечаются для этого региона. Проведено сравнение фаун Чукотки, Камчатки и севера Якутии.

### INTRODUCTION

The first very short regional list of the drosophilid flies (Drosophilidae) of Chukotka includes three species of the genus *Drosophila* collected by A.V. Barkalov in the basin of Anadyr River (64°83'N, 175°96'E) and by K. Gorodkov in vicinity of Pevek (69°36'N, 170°10'E) (Nartshuk, 2014). Here we present new additions to this list after examination of the materials collected by A. Dubinin in Chukotka.

### MATERIAL AND METHODS

Drosophilid flies were collected in vicinities of Bilibino (68°3' N, 166°27' E), Omolon (65°14' N, 160°32' E), Markovo (64°40' N, 170°24' E), and Anadyr (64°43' N, 177°29' E) in 2006 by A. Dubinin (AD) using baits. The baits were made from standard 0.5L plastic bottles with a hole cut in one side and contained mixture of pre-boiled semolina infused with brewed liquid mixture of yeast and raisin. The baits were placed under the trees. All collected specimens were stored in 70% ethanol and determined by the author. New for Chukotka records are asterisked (\*).

### LIST OF SPECIES

#### Family Drosophilidae

Subfamily Drosophilinae

\**Chymomyza costata* (Zetterstedt, 1838)

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD); Markovo, 15.VII–15.VIII 2006, 3 ♂, 7 ♀ (AD); Omolon, 15.VII–15.VIII 2006, 2 ♂, 3 ♀ (AD).

DISTRIBUTION. Widespread in Palearctic region including Russia (Bächli & Rocha Pité, 1984; Gornostaeve, 1997; Sidorenko, 2001) and known from Northern Yakutia (Nartshuk, 2014) and Kamchatka (Gornostaeve *et al.*, 2018).

\**Chymomyza fuscimana* (Zetterstedt, 1838)

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 1 ♂ (AD); Markovo, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD).

DISTRIBUTION. Widespread in Palearctic region including Russia (Bächli & Rocha Pité, 1984; Gornostaeve, 1997; Sidorenko, 2001); recorded from Kamchatka (Gornostaeve *et al.*, 2018).

\**Drosophila (Drosophila) ezoana* Takada et Okada, 1957

MATERIAL. **Russia**: Chukotka, Markovo, 15.VII–15.VIII 2006, 5 ♂ (AD); Omolon, 15.VII–15.VIII 2006, 2 ♂ (AD).

DISTRIBUTION. North Europe, Japan (Bächli & Rocha Pité, 1984), Russian Far East (Gornostaeve, 1997; Sidorenko, 2001) including Northern Yakutia (Nartshuk, 2014) and Kamchatka (Gornostaeve *et al.*, 2018).

\**Drosophila (Drosophila) funebris* (Fabricius, 1787)

MATERIAL. **Russia**: Chukotka, Markovo, in village, 15.VII–15.VIII 2006, 3 ♂, 4 ♀ (AD).

DISTRIBUTION. Cosmopolitan synanthropic species (Bächli & Rocha Pité, 1984), widespread in Russia (Gornostaeve, 1997; Sidorenko, 2001) and recorded from Kamchatka (Gornostaeve *et al.*, 2018).

*Drosophila (Drosophila) subarctica* Hackman, 1969

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD); Markovo, 15.VII–15.VIII 2006, 3 ♂, 7 ♀ (AD); Omolon, 15.VII–15.VIII 2006, 2 ♂, 3 ♀ (AD); Anadyr, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD).

DISTRIBUTION. North Europe (Bächli & Rocha Pité, 1984) and North Russia (Gornostaeve, 1997; Sidorenko, 2001), recorded from Chukotka and Northern Yakutia (Nartshuk, 2014) and Kamchatka (Gornostaeve *et al.*, 2018).

\**Drosophila (Drosophila) testacea* von Roser, 1840

MATERIAL. **Russia**: Chukotka, Markovo, 15.VII–15.VIII 2006, 4 ♂, 7 ♀ (AD); Omolon, 15.VII–15.VIII 2006, 1 ♂, 1 ♀ (AD).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaeve, 1997; Sidorenko, 2001) including Kamchatka (Gornostaeve *et al.*, 2018).

***Drosophila (Drosophila) transversa* Fallén, 1823**

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 2 ♂, 2 ♀ (AD); Markovo, 15.VII–15.VIII 2006, 6 ♂, 7 ♀ (AD); Omolon, 15.VII–15.VIII 2006, 2 ♂, 2 ♀ (AD); Anadyr, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD).

DISTRIBUTION. Widespread in Palearctic region and Russia (Bächli & Rocha Pité, 1984; Gornostaev, 1997; Sidorenko, 2001), recorded from Chukotka and Northern Yakutia (Nartshuk, 2014) and Kamchatka (Gornostaev *et al.*, 2018).

***Drosophila (Drosophila) sp.***

NOTES. One female collected in Chukotka in vicinity of Pevek was recorded as belonging to *Drosophila virilis* species group (Nartshuk, 2014) but author failed to determine this fly. Actually *Drosophila virilis* species group consists of very closely related species that can be distinguished only by the shape of male genitalia. The female from Chukotka may belong to any of four species of this group (*Drosophila ezoana* Takada et Okada, 1957, *D. littoralis* Meigen, 1830, *D. lummei* Hackman, 1972, or *D. montana* Patterson et Wheeler, 1942) recorded from the boreal zone of Palearctic.

**\**Drosophila (Sophophora) alpina* Burla, 1948**

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 3 ♂, 2 ♀ (AD).

DISTRIBUTION. North Europe (Bächli & Rocha Pité, 1984) and North Russia (Gornostaev, 1997; Sidorenko, 2001) including Northern Yakutia (Nartshuk, 2014).

**\**Drosophila (Sophophora) melanogaster* Meigen, 1830**

MATERIAL. **Russia**: Chukotka, Bilibino, inside a room, 15.VII–15.VIII 2006, 2 ♂, 2 ♀ (AD).

DISTRIBUTION. Cosmopolitan synanthropic species (Bächli & Rocha Pité, 1984), widespread in Russia (Gornostaev, 1997; Sidorenko, 2001), but never recorded from Kamchatka and Northern Yakutia.

**\**Scaptomyza (Hemiscapromyza) unipunctum* (Zetterstedt, 1847)**

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 1 ♂ (AD); Markovo, 15.VII–15.VIII 2006, 3 ♂ (AD); Anadyr, 15.VII–15.VIII 2006, 1 ♂ (AD).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001) including Kamchatka (Gornostaev *et al.*, 2018).

**\**Scaptomyza (Parascapromyza) pallida* (Zetterstedt, 1847)**

MATERIAL. **Russia**: Chukotka, Bilibino, 15.VII–15.VIII 2006, 2 ♂, 2 ♀ (AD); Markovo, 15.VII–15.VIII 2006, 3 ♂, 2 ♀ (AD); Anadyr, 15.VII–15.VIII 2006, 3 ♂ (AD).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001); known Northern Yakutia (Nartshuk, 2014) and Kamchatka (Gornostaev *et al.*, 2018).

**\**Scaptomyza (Scaptomyza) flava* (Fallén, 1823)**

MATERIAL. **Russia**: Chukotka, Markovo, 15.VII–15.VIII 2006, 2 ♀ (AD); Anadyr, 15.VII–15.VIII 2006, 1 ♂ (AD).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001) including Kamchatka (Gornostaev *et al.*, 2018).

**\**Scaptomyza (Scaptomyza) graminum* (Fallén, 1823)**

MATERIAL. **Russia**: Chukotka, Markovo, 15.VII–15.VIII 2006, 1 ♂, 2 ♀ (AD).

DISTRIBUTION. Widespread in Palearctic (Bächli & Rocha Pité, 1984) and Russia (Gornostaev, 1997; Sidorenko, 2001) and recorded also from Kamchatka (Gornostaev *et al.*, 2018).

## DISCUSSION

Now 14 species in three genera of Drosophilidae are known from Chukotka, 11 of which are recorded here from this region for the first time. Totally 22 species of Drosophilidae are known from the boreal zone of North-East Asia: 16 species from Kamchatka (Gornostaev *et al.*, 2018), 9 species from Northern Yakutia (Nartshuk, 2014), and 14 species from Chukotka (Nartshuk, 2014 and present data). *Drosophila melanogaster* is found in Chukotka only; *S. coleoptrata* (Scopoli, 1763), *S. hypoleuca* Meigen, 1830, *Drosophila montana* Patterson et Wheeler, 1942, *D. nigromaculata* Kikkawa et Peng, 1938 and *Scaptomyza consimilis* Hackman, 1955 are known from Kamchatka only; three species (*Drosophila littoralis* Meigen, 1830, *D. lummei* Hackman, 1972, *D. relimma* Wheeler, 1960) are recorded from Northern Yakutia only; *Drosophila alpina* is known from Chukotka and Northern Yakutia; *Chymomyza fuscimana*, *Drosophila funebris*, *D. testacea*, *Scaptomyza unipunctum*, *S. flava* and *S. graminum* are found in Chukotka and Kamchatka; and five species (*Chymomyza costata*, *Drosophila ezoana*, *D. subarctica*, *D. transversa* and *Scaptomyza pallida*) are widely distributed in the boreal zone of North-East Asia. Thus, the fauna of Drosophilidae of Chukotka seems to be very similar to the fauna of Kamchatka and Northern Yakutia.

## REFERENCES

Bächli, G. & Rocha Pité, M.T. 1984. Family Drosophilidae. P. 186–220. In: *Catalogue of Palearctic Diptera. Vol. 10. Clusiidae–Chloropidae*. Akadémiai Kiadó, Budapest.

Gornostaev, N.G. 1997. Addition to the fauna of drosophilid flies (Diptera, Drosophilidae) of Russia. *Russian Entomological Journal*, 6(1–2): 113–118.

Gornostaev, N.G., Kulikov, A.M., Sorokina, S.Yu. & Tyukmaeva, V.I. 2018. Review of the drosophilid flies (Diptera: Drosophilidae) of Kamchatka. *Far Eastern Entomologist*, 359: 16–20. DOI: <https://doi.org/10.25221/fee.359.4>

Nartshuk, E.P. 2014. Fruit flies (Diptera: Drosophilidae) of the Russian Arctic. *Zoosystematica Rossica*, 23(2): 256–263.

Sidorenko, V.S. 2001. Family Drosophilidae. P. 211–241. In: Lehr, P.A. (Ed.). *Key to the insects of the Russian Far East. Vol. 2. Diptera and fleas. Part 2*. Dalnauka, Vladivostok. [In Russian]